

## Abstract

The present invention provides a control method of an AC motor by which, after the recovery of the instantaneous power failure, the phase and angular velocity of the residual voltage of the AC motor are accurately measured, and the re-operation can be conducted quickly and smoothly.

That is, an electric power converter (1) to output the electric power to the AC motor (9), and the current control section by which the output current of the electric power converter is controlled, according to the difference signal of the current command signals  $i_{dref}$ ,  $i_{qref}$ , and the output current command signals  $i_{dfb}$ , and  $i_{qfb}$  of the electric power converter, are provided, and when the AC motor is in the free run condition, the current control is conducted by forcibly making the current command signal zero by the instantaneous power failure re-start control circuit (11) so that the current of the AC motor is made zero, and according to the output voltage command signal calculated by using the current control section output at this time, the amplitude, phase and angular velocity of the residual voltage of the AC motor are found, and the re-start after the power recovery is conducted.